

PFP Recovery Update – April 5, 2018

Updated 12:30 p.m. PST

Updates since April 2, 2018 highlighted

The next scheduled update is April 9, 2018

Summary

The focus at the Plutonium Finishing Plant (PFP) is on the health and safety of the workforce, addressing worker concerns, ensuring the remaining PFP facility debris and rubble piles are stable, and mitigating the potential for any additional spread of contamination.

During the week of April 2, crews continued shipping previously-packaged waste from the PFP to the Central Waste Complex. Crews also began work, like equipment maintenance, to move previously-packaged large sacks of waste to measure the radiological contents inside in preparation for eventual shipment to the CWC.

Workers began moving into newly-established mobile offices; routine surveys and fixative application occurred throughout the week.

Plant Status

System/Area	Status
PFP Workforce	<ul style="list-style-type: none">On April 5, a worker's battery-powered respiratory air filter failed when they were in an area requiring respiratory protection. The employee held their breath while leaving the area and experienced chest pain and breathing difficulty upon exit. No contamination was found on the worker, and paramedics transported the worker to Kadlec Regional Medical Center as a precaution.
PRF Area	<ul style="list-style-type: none">The area remains stable with no contamination detected. Routine fixative applications continue.
PFP Property Area	<ul style="list-style-type: none">The area remains stable with no contamination detected. Routine fixative applications continue.

Radiological Surveys, Sampling and Analysis

- Surface monitoring: metal plates, called "cookie sheets," are placed throughout the work control area, usually near air monitors. The metal plates are checked with detectors, normally twice a day, for contamination. Any contamination detected is expressed in disintegrations per minute, a unit that measures how many radioactive atoms decay in a minute.
- Continuous air monitors (CAMs): stationary monitors are placed in or near the PFP demolition zone and provide real-time information about the level of airborne radioactivity. The monitors are set to alarm, allowing workers to take protective measures if there is an indication of airborne radioactivity. Filters may also be collected from the CAMs for analysis in a laboratory to provide additional information about any airborne radioactivity. Contamination values are expressed as derived air concentrations times hours (DAC-hours).
- Fixed air samplers: stationary monitors are placed around radiological boundaries to provide retrospective, not real-time, data about the presence and type of airborne radioactivity. The monitors are fitted with filters that are routinely collected for further analysis. Contamination values are expressed as derived air concentrations times hours (DAC-hours).

On-Site and Environmental:

Cookie Sheets (68 total)		
	April 5 Day Shift	April 4 Swing Shift
Number Surveyed	54	68
Number Clean*	54	68
Number Contaminated (Note location and level)	0	0
*Clean = direct contamination < 500 dpm/100cm ² and removable contamination < 20 dpm/100cm ² (or < 100 dpm/100cm ² in a posted CA or HCA)		

- **Continuous air monitor (CAM)** readings (14 total): All reading less than 1 DAC-hr as of 10:40 a.m., April 6.
- **Fixed air samplers** (23 total): Air filters removed and analyzed with no indication of radioactivity as of April 5.

Bioassays: On March 22, all bioassays requested as a result of the December 2017 contamination event were complete and the results communicated, with the summary of the results below. Bioassays are used when a person is potentially exposed to contamination to determine whether there has been an intake (e.g., inhalation or ingestion) of radioactive material and results include an estimated dose.

Requested	281
Negative	270
Positive with Verified Dose Assigned	11
Less than 1 mrem: 2	
1-10 mrem: 8	
10-20 mrem: 1	

- Doses are the expected dose over 50 years.
- DOE requirements for protecting individuals from ionizing radiation set an administrative control level, or dose limit, of 100 mrem/year for non-radiological workers and members of the public visiting DOE sites (DOE Order 458.1). The CHPRC administrative dose limit for radiological workers is 500 mrem/year.

External:

- **Department of Health Web Page:** The Washington State Department of Health has set up a [web page](#) with environmental monitoring information about Hanford.
- **Government Vehicle Radiological Surveys:**
 - On Feb. 23, crews surveyed two additional government vehicles that were in the vicinity of the PFP in December. No contamination was detected.
 - On Feb. 22, follow-up interior surveys of 54 PFP-controlled government vehicles were completed. No contamination as detected.
 - On Feb. 1, CHPRC completed requested surveys of four Hanford Fire Department (HFD) government vehicles. No contamination was detected.
 - Surveys of PFP-controlled government vehicles were completed Jan. 23. Decontamination and dispositioning of 27 contaminated vehicles is ongoing. Those vehicles remain in a radiologically-controlled area.

	Total
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PFP-Controlled government vehicles surveyed	97
Decontaminated and returned to service	2
Contaminated and awaiting disposition (held as radiologically-controlled vehicles or decontaminated)	27
No contamination found and returned to service	68

- **Personal Vehicle Radiological Surveys:**

- Personal vehicle survey summary:
 - Dec. 26: Seven personal vehicles identified as contaminated by close of business Dec. 19 were decontaminated, surveyed and released as of Dec. 26
 - Jan. 26: One of seven original personal vehicles surveyed and released Dec. 26 (and remained on site since that time) was found to be contaminated; vehicle was decontaminated Jan. 28.
 - Jan. 31: One of seven original personal vehicles surveyed and released Dec. 26 (rental car) was resurveyed and found to be free of contamination.
 - Feb. 1: Seven Hanford Fire Department personal vehicles surveyed; no contamination was detected.
 - Feb. 26: One employee's personal vehicle surveyed; no contamination was detected.
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- **Home Surveys:**

- There have been no new requests for home surveys since Feb. 5. Home survey summary:
 - Dec. 20: Seven originally-requested home surveys complete with no contamination found.
 - Feb. 6: Requested survey of PFP employee's home completed with no contamination found.

Expert Panel: Members of the PFP Expert Panel continue to meet. The panel consists of federal, officials with expertise in several scientific and technical disciplines who can consult with industry and academic leaders with similar expertise. The panel will evaluate CHPRC's recovery from the contamination event and its proposed technical approach for safely completing demolition of PFP. The panel will provide observations and recommendations to CHPRC. The Expert Panel's charter and biographies of its members are available at www.Hanford.gov.

Workforce Management:

- The workforce remains committed to the current mission of hazard recognition and control despite the challenging situation.

Communications:

- During the week of April 2, PFP management conducted four briefings with Central Waste Complex employees on upcoming waste shipment routes from PFP to the CWC. Additionally during the week, PFP management held one roundtable with PFP radiological control technicians and briefed HAMMER Federal Training Center management regarding current stabilization activities underway at PFP.